

FOOTWEAR AID FOR WALKING IN WATER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a footwear aid for walking in water, which is worn on a foot to facilitate walking in water in a pool.

2. Description of the Related Art

Walking in water in a pool is widely performed as having excellent effects as exercise, rehabilitation, and the like for elderly people. In general, pools are not built for a purpose of walking, and many pools have tiles applied on bottom surfaces thereof, causing a state where feet slip easily.

Upon walking in water in this type of pool, a person who is capable of swimming can walk without feeling uneasiness, and even if he/she slips and loses balance to fall in the water, he/she can stand up quickly.

However, a person who cannot swim feels uneasiness being in water per se, and moreover, he/she is in the state where slippage easily occurs, thus even with a small slip it is easy for him/ her to lose balance and fall. Furthermore, when he/she falls, he/she might panic and not be able to stand up easily, possibly causing an unexpected accident.

Therefore, in a pool designed especially for walking in water,

a walking-only course is provided in a portion of the pool, and a hand railing for a walker to hold on to is provided. However, considering the aspect of exercise, it is preferable to walk while moving one's entire body in water. In order to do this, it is preferable for a walker to be able to walk easily without holding onto the hand railing.

In light of this, the inventor of the present invention investigated for a technique for preventing slippage of the foot in a pool to thereby facilitate walking in water, and developed and patented (JP 10-53795 A) a footwear aid for walking in water, which is constituted of a rubber tube-shape body closely enveloping at least from a toe base portion to a mid-foot portion, and which is provided with a toe-separation piece to be inserted at least between a big toe and an index toe, on a toe-side opening of the tube-shape body.

The above-mentioned footwear aid for walking in water, which was developed by the present inventor, is made of rubber. Therefore, due to its material property, there is little slippage against the walking surface, thereby facilitating walking in water. However, the inventor of the present invention was not satisfied with this and continued the investigation for a footwear aid for walking in water with which there is even less slippage against the walking surface. As a result, the inventor of the present invention discovered that a footwear aid made of cotton causes less slippage

against the tile surface in the water than that made of rubber, and moreover cotton is more comfortable when worn on the foot than rubber. Thus, the inventor completed the present invention.

SUMMARY OF THE INVENTION

It is an object of the present invention to more effectively prevent a foot slipping in a pool, and moreover to provide a footwear aid for walking in water which fits more comfortably on the foot.

In order to attain the above-mentioned object, according to the present invention, there is provided a footwear aid for walking in water, characterized by including: a flexible sole-contact-sheet main body; and a foot-fastening belt provided to the sole-contact-sheet main body, in which at least a bottom surface side of the sole-contact-sheet main body is formed of a woven material of cotton or a cotton blend.

Fibers of the cotton exhibit a twisted shape, and they are not distorted in shape even when immersed in water. Therefore, the cotton or the cotton-blend woven material's mesh is not distorted even in water, and thus it has sufficient frictional resistance even in water. Therefore, when the sole-contact-sheet main body, which has at least its bottom surface side formed of the cotton or cotton-blend woven material, is applied to the sole of the foot of a wearer and fastened to the foot with the foot-fastening belt, and then the wearer walks in water, the slippage against the walking

surface is extremely small due to material property of the cotton or the cotton-blend woven material forming the bottom cotton surface side of the sole-contact-sheet main body, thus facilitating the walking in water.

Further, since the above-mentioned sole sheet main body has flexibility, it changes shape according to a movement of the foot. This enables a stable walking state to be obtained without an uncomfortable feeling. At the same time, a movement of the foot is not obstructed during swimming, thus allowing a wearer to swim in a normal fashion.

Further, when an upper side surface of the sole-contact-sheet main body, namely a surface contacting the sole of the foot, is formed of the cotton or cotton-blend woven material similarly to the back surface side, the footwear aid can more comfortably fit on the foot.

In accordance with the above-mentioned footwear aid for walking in water according to the present invention, at least the bottom surface side of the sole-contact-sheet main body is formed of the cotton or the cotton-blend woven material whose mesh is not distorted and has sufficient frictional resistance even in water. Therefore, when the above-mentioned sole-contact-sheet main body is applied to the sole of the foot of a wearer and fastened to the foot with the foot-fastening belt, and then the wearer walks in water, there is extremely little slippage against the walking

surface due to the material property of the cotton or the cotton-blend woven material forming the bottom cotton surface side of the above-mentioned sole-contact-sheet main body, and thus it is extremely easy to walk in the water.

Further, since the above-mentioned sole sheet main body has flexibility, it changes shape according to a movement of the foot. Since this enables a stable walking state to be obtained without an uncomfortable feeling, the footwear aid is optimum as a footwear aid for walking in water in the pool, particularly in exercise, rehabilitation, and the like of elderly people.

Further, in addition to not obstructing walking, the footwear aid does not obstruct a movement of the foot during swimming, thus allowing a wearer to swim in a normal fashion.

Further, when an upper side surface of the sole-contact-sheet main body, namely a surface contacting the sole of the foot, is formed of the cotton or cotton-blend woven material similarly to the back surface side, the footwear aid can fit more comfortably on the foot. Further, since the construction is simple, manufacturing is easy, and the footwear aid can be obtained inexpensively.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a plan view showing an example of an embodiment of a footwear aid for walking in water according to the present

invention;

Fig. 2 is a frontal view of the footwear aid for walking in water shown in Fig. 1;

Fig. 3 is a partial enlarged cross-sectional view of a sole-contact-sheet main body of the footwear aid for walking in water shown in Fig. 1;

Fig. 4 is a partial enlarged cross-sectional view showing another example of a sole-contact-sheet main body;

Fig. 5 is an explanatory diagram showing a usage state of the footwear aid for walking in water shown in Fig. 1; and

Fig. 6 is a plan view showing another example of an embodiment of a footwear aid for walking in water according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Hereinafter, detailed explanation is given regarding embodiments of a footwear aid for walking in water according to the present invention. Fig. 1 to Fig. 5 show an example of an embodiment of the present invention. Fig. 1 is a plan view, Fig. 2 is a frontal view, Fig. 3 is a partial enlarged cross-sectional view of a sole-contact-sheet main body, Fig. 4 is a partial enlarged cross-sectional view showing another example of a sole-contact-sheet main body, and Fig. 5 is an explanatory diagram showing a state where the footwear aid for walking in water of the

present example is worn on a foot.

In the figures, reference numeral 1 indicates a flexible sole-contact-sheet main body, and reference numeral 2 indicates a foot-fastening belt provided to the sole-contact-sheet main body. A shape of the sole-contact-sheet main body 1 is not particularly limited, and in the present example, it is formed in a shape generally conforming to the shape of the foot sole. Further, the sole-contact-sheet main body 1 has flexibility enabling shape transformation according to at least a movement of the foot, and at least a bottom surface side thereof is formed of a cotton or cotton-blend woven material indicated by reference numeral 3.

In this embodiment, as shown in Fig. 3, a construction in which a flexible core material 4 is covered by the woven material 3 is adopted, but the invention is not restricted to this construction. As shown in Fig. 4, the woven material 3 may be fixed to the bottom of the flexible core material 4 by mean of adhesion, sewing, or other fixing means. Further, with respect to the flexible core material 4, there is no particular restriction regarding its material provided that it is flexible. For example, a thick woven material, felt, rubber, foam synthetic resin, or the like are used.

Further, regarding the woven material 3, cotton or a cotton-blend may be used. However, to create a large friction resistance in water, a greater proportion of cotton is preferable, and 100% cotton is most preferable. Further, a large cotton thread

size is preferable.

The foot-fastening belt 2, which is provided to the sole-contact-sheet main body 1 and constructed as described above, is for attaching the sole-contact-sheet main body 1 to the sole of the foot so as not to separate therefrom. There is no particular restriction as to the shape, material, and the like of the foot-fastening belt 2 provided that the sole-contact-sheet main body 1 does not separate from the sole of the foot. The foot-fastening belt 2 of this embodiment is constituted of 2 straps 5 and 6, which are wrapped around and fastened to a toe base portion of the sole-contact-sheet main body 1, and 2 straps 7 and 8, which are wrapped around and fastened to a portion from a heel portion to an instep portion. The 2 straps 5 and 6, and the 2 straps 7 and 8 are fastened by surface fasteners 9.

Upon using the footwear aid for walking in water as constructed as described above, first, the sole-contact-sheet main body 1 is applied on the sole of the foot, and a foot-fastening belt 2 constituted of the 2 straps 5 and 6 wrapped around and fastened to the toe base portion, and the foot-fastening belt 2 constituted of the 2 straps 7 and 8 wrapped around and fastened to a portion from the heel portion to the instep portion. By performing this, the sole-contact-sheet main body 1 is attached to the sole of the foot so as not to separate therefrom. The 2 straps 5 and 6, and the 2 straps 7 and 8, which constitute the foot-fastening belt 2,

are fastened by the surface fastener 9. Therefore, fastening can be performed easily (Fig. 5).

In this way, the footwear aid for walking in water is worn on the foot, and a wearer enters a pool and walks in the water. At this time, regarding the sole-contact-sheet main body 1, at least the bottom surface side thereof is made of the cotton or the cotton-blend woven material 3, and the cotton fibers exhibit the shape of twisted strips. This shape is not distorted even when immersed in water, and the cotton or the cotton-blend woven material 3 mesh is not distorted even in water. In addition, sufficient friction resistance can be obtained even in water. Therefore, due to the material property of the cotton or the cotton-blend woven material 3 forming the bottom surface side of the sole-contact-sheet main body 1, there is extremely little slippage against the walking surface, thus facilitating walking in water. At this time, regarding the woven material 3, the greater the cotton proportion, the greater the frictional resistance: If the woven material is 100% cotton, walking in water becomes even easier. Further, when the cotton thread size is large, the frictional resistance in water can be increased, and walking in water becomes even easier.

Further, since the sole-contact-sheet main body 1 is flexible, its shape changes in accordance with the movement of the foot, whereby a stable walking state can be achieved without causing uncomfortable feeling. In addition, the footwear aid does not

obstruct the movement of the foot during swimming, thus allowing a wearer to swim in a normal fashion. Further, as shown in Fig. 3, when constructed with the flexible core material 4 covered by the woven material 3, the footwear aid fits more comfortably on the foot.

Fig. 6 shows another example of an embodiment of the present invention. In this example, as a part of the foot-fastening belt 2 which is provided to the sole-contact-sheet main body 1, the foot-fastening belt 2 which is to be fastened to the toe portion is constituted of a thong 10. The foot-fastening belt 2 for wrapping around and fastening to a portion from the heel portion to the instep portion is constituted of the 2 straps 7 and 8, similarly to the previous example, and the 2 straps 7 and 8 are fastened with the surface fastener 9.